

# KS2 Computing/ICT Scheme of Work

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

## **In Key stage 2**

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing programmes of study: Key stages 1 and 2, National curriculum in England, Reference: DFE-00171-2013

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## Topics to be covered throughout the whole of KS2:

### **Computer Science**

- Textease Turtle/Logo
- Scratch
- Hour of code

### **Information Technology**

- Word/Textease
- Paint
- Multimedia
- Database
- Graphics
- Excel - Spreadsheets

### **Digital Literacy**

- E-Safety
- Websites
- Network
- Emails and messages
- Online publishing
- Online research

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**Overview of the Year (Class teacher to choose appropriate units of work depending on current class needs):**

<b>Term</b>	<b>Topic</b>
<b>Autumn 1</b>	Pupil Profiles Digital Literacy - E-Safety – Smart Rules Digital Literacy
<b>Autumn 2</b>	Information Technology
<b>Spring 1</b>	Pupil Profiles Digital Literacy - E-Safety Digital Literacy
<b>Spring 2</b>	Computer Science
<b>Summer 1</b>	Pupil Profiles Digital Literacy - E-Safety Digital Literacy
<b>Summer 2</b>	Information Technology

**NB. E-Safety is also addressed by class teachers throughout the year during meeting time.**